

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P735912

Luminaire Tested: S122RDRP-S290D930-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2024
Report Number: P735912
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2308-143-2)
Test Lab: INNOVATION CENTER
Issue Date: 1/24/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122RDRP-S290D930-X4F0-XX-UDD-W-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

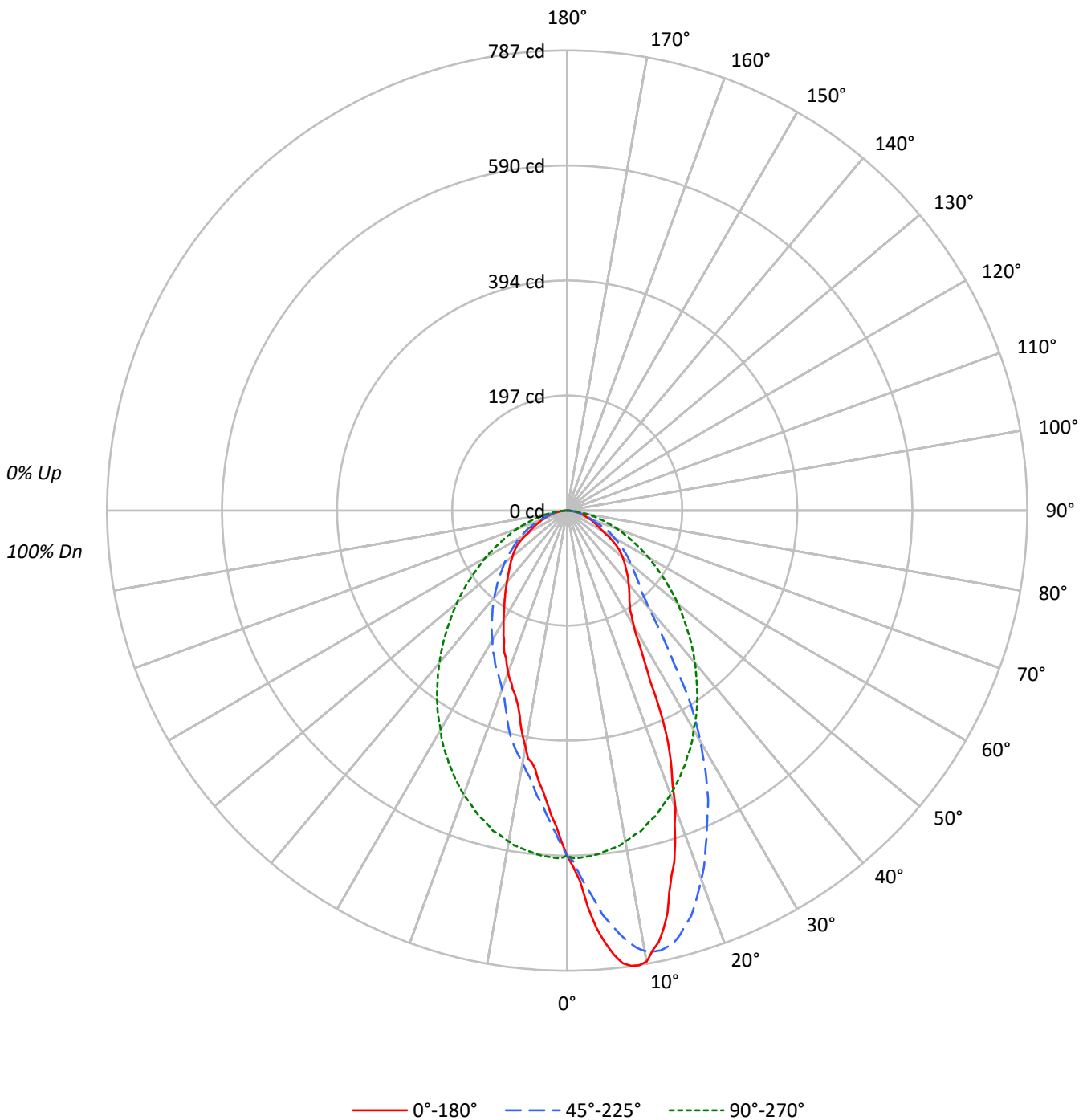
Lumens per Lamp: N/A
Luminaire Lumens: 1011.1 lumens
Efficiency: N/A
Efficacy: 80.9 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 1.11 / 1
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

Input Watts (W): 12.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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Luminous Intensity Polar Plot



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					20	
RC	80					70					50					30					10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87				87
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75				75
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66				66
4	87	77	69	63	85	75	68	62	73	67	62	71	65	61	69	64	60	58				58
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	54	52				52
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48	46				46
7	71	58	50	45	69	57	50	45	56	49	44	55	49	44	53	48	44	42				42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38				38
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35				35
10	59	46	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32				32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	11342	11342	11342	11342	11342
5°	14311	13385	11386	9674	9263
10°	15286	14925	11213	8561	8000
15°	13446	14921	10917	7675	6666
20°	11084	13733	10569	6664	6032
25°	7902	12057	10146	6172	5427
30°	5056	10112	9601	5662	4821
35°	4355	7452	9102	5254	4372
40°	4105	5450	8539	4863	4015
45°	3879	4670	7937	4504	3792
50°	3693	4255	7374	4192	3651
55°	3388	3938	6742	3854	3519
60°	2676	3587	6193	3614	2975
65°	2420	3211	5617	3357	2711
70°	2231	2591	5103	2894	2495
75°	2079	2347	4456	2584	2347
80°	1926	2125	3775	2313	2125
85°	1720	1875	2889	2029	1875

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 11112 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.2	5.7
10°-20°	153.8	15.2
20°-30°	192.9	19.1
30°-40°	183.8	18.2
40°-50°	162.2	16.0
50°-60°	127.5	12.6
60°-70°	81.4	8.0
70°-80°	41.4	4.1
80°-90°	11.0	1.1
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	403.9	39.9
0°-40°	587.7	58.1
0°-60°	877.4	86.8
0°-90°	1011.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1011.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	590	590	590	590	590	
5°	742	694	590	501	480	72
15°	676	750	549	386	335	187
25°	373	568	478	291	256	168
35°	186	318	388	224	186	118
45°	143	172	292	166	140	111
55°	101	118	201	115	105	89
65°	53	71	124	74	60	53
75°	28	32	60	35	32	30
85°	8	8	13	9	8	9
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	590.1	590.1	590.1	590.1	590.1	590.1	590.1	590.1	590.1
1°	610.0	612.8	599.7	601.1	594.7	583.4	572.4	573.5	565.6
2°	634.5	641.9	623.8	612.8	594.4	574.5	552.5	549.7	540.1
3°	678.8	675.3	645.5	623.1	593.0	563.2	535.5	529.1	520.9
4°	714.7	704.0	667.5	636.3	592.3	550.0	518.8	507.8	499.6
5°	741.7	728.2	693.7	646.2	590.1	542.6	501.4	489.0	480.1
6°	763.3	753.0	710.8	655.4	587.3	531.6	491.1	474.4	465.2
7°	780.0	771.5	728.2	667.8	584.8	520.6	474.8	457.4	446.4
8°	786.4	782.5	744.1	676.7	582.0	512.8	460.3	444.6	434.7
9°	787.4	787.8	756.9	685.2	579.5	498.6	450.0	434.0	428.7
10°	783.2	786.4	764.7	694.8	574.5	491.5	438.6	423.3	409.9
11°	766.5	780.7	768.6	701.2	570.3	480.1	428.7	408.8	395.3
12°	754.1	767.6	769.0	709.4	565.3	474.8	420.2	393.5	379.3
13°	733.5	747.7	765.4	711.5	562.5	461.7	409.5	377.9	360.5
14°	709.0	731.7	759.8	716.1	555.4	450.3	398.9	355.9	345.6
15°	675.7	707.9	749.8	717.9	548.6	442.5	385.7	344.9	335.0
16°	648.0	684.5	736.3	717.9	544.4	431.9	371.5	335.3	325.4
17°	627.0	656.8	725.3	718.2	537.3	424.4	357.3	326.5	318.7
18°	597.6	630.9	707.9	716.8	529.8	415.5	345.3	319.0	309.4
19°	564.9	604.7	689.5	714.3	523.4	406.3	332.5	311.2	303.0
20°	541.9	578.4	671.4	710.4	516.7	400.3	325.8	302.3	294.9
21°	503.2	547.9	653.3	705.1	509.6	390.0	316.5	294.5	286.4
22.5°	463.8	505.0	619.9	696.2	497.9	377.2	306.2	285.0	272.9
23°	448.5	494.7	609.6	693.7	494.0	374.0	303.0	280.7	270.0
24°	415.9	463.8	588.4	685.9	485.4	363.4	297.0	272.2	264.7
25°	372.6	437.5	568.5	677.8	478.4	355.6	291.0	265.4	255.9
26°	323.6	401.7	550.4	667.8	468.4	344.9	282.8	259.0	245.6
27°	293.5	370.8	525.9	657.2	461.3	337.1	276.1	249.5	239.9
28°	269.3	322.2	503.9	646.9	452.8	327.5	271.5	242.7	231.4
29°	243.1	295.6	478.0	633.1	443.6	316.5	264.0	236.0	223.9
30°	227.8	267.2	455.6	622.8	432.6	309.1	255.1	229.2	217.2
32.5°	200.1	220.4	395.0	593.3	411.6	287.8	240.6	210.8	200.5
35°	185.6	196.2	317.6	558.9	387.9	270.0	223.9	195.5	186.3
37.5°	174.6	181.0	262.2	522.0	363.7	254.4	208.7	181.3	172.5
40°	163.6	168.6	217.2	486.5	340.3	239.2	193.8	166.8	160.0
42.5°	153.7	157.6	188.4	451.4	316.2	223.6	179.2	155.4	149.4
45°	142.7	146.2	171.8	408.8	292.0	207.6	165.7	143.0	139.5
47.5°	133.4	135.9	155.8	370.8	268.3	192.3	151.9	133.1	130.6
50°	123.5	126.7	142.3	328.6	246.6	177.4	140.2	124.2	122.1
52.5°	113.9	115.3	130.9	286.4	223.9	162.9	127.7	115.3	113.9
55°	101.1	106.8	117.5	243.1	201.2	149.4	115.0	106.1	105.0
57.5°	86.6	94.0	105.4	204.0	179.9	134.5	104.7	97.6	93.0
60°	69.6	78.4	93.3	169.6	161.1	121.0	94.0	83.0	77.4
62.5°	61.0	63.9	82.3	141.9	141.9	108.2	83.4	71.3	68.8
65°	53.2	55.4	70.6	117.5	123.5	94.0	73.8	61.7	59.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	46.5	48.3	53.9	97.9	106.5	82.0	61.0	53.9	51.5
70°	39.7	41.2	46.1	79.8	90.8	69.9	51.5	46.1	44.4
72.5°	33.7	35.1	38.0	60.0	74.5	58.2	43.3	39.4	38.0
75°	28.0	28.7	31.6	44.7	60.0	46.5	34.8	32.3	31.6
77.5°	22.7	23.1	24.8	31.9	46.5	35.5	28.0	25.9	25.5
80°	17.4	17.7	19.2	23.1	34.1	25.5	20.9	19.9	19.2
82.5°	12.4	12.8	13.5	15.6	23.1	17.4	14.9	14.5	13.5
85°	7.8	7.8	8.5	9.6	13.1	9.9	9.2	8.9	8.5
87.5°	3.5	3.5	3.9	3.9	6.0	4.3	4.3	3.9	3.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	14.87	16.34	15.24	16.65	16.97	17.57	19.04	17.93	19.35	19.66
	3H	15.99	17.30	16.37	17.63	17.99	19.01	20.32	19.39	20.65	21.01
	4H	16.43	17.66	16.83	18.01	18.39	19.51	20.74	19.91	21.09	21.47
	6H	16.77	17.91	17.19	18.28	18.67	19.84	20.97	20.25	21.34	21.73
	8H	16.89	17.97	17.32	18.36	18.76	19.93	21.01	20.35	21.40	21.80
	12H	16.96	18.00	17.39	18.38	18.81	19.97	21.01	20.41	21.39	21.82
4H	2H	16.04	17.27	16.44	17.62	18.00	18.02	19.25	18.42	19.60	19.98
	3H	17.27	18.29	17.68	18.69	19.09	19.68	20.70	20.09	21.10	21.50
	4H	17.75	18.67	18.18	19.08	19.52	20.32	21.23	20.75	21.65	22.09
	6H	18.15	18.95	18.61	19.39	19.85	20.77	21.57	21.23	22.01	22.47
	8H	18.28	19.03	18.75	19.47	19.94	20.90	21.64	21.37	22.09	22.56
	12H	18.38	19.05	18.87	19.53	20.00	20.98	21.64	21.46	22.12	22.59
8H	4H	18.15	18.89	18.61	19.34	19.81	20.43	21.17	20.89	21.62	22.09
	6H	18.64	19.25	19.14	19.75	20.23	20.99	21.60	21.49	22.10	22.58
	8H	18.83	19.38	19.35	19.89	20.38	21.19	21.74	21.71	22.25	22.74
	12H	18.99	19.47	19.50	19.97	20.53	21.34	21.82	21.85	22.32	22.88
12H	4H	18.20	18.86	18.68	19.34	19.81	20.42	21.08	20.90	21.56	22.03
	6H	18.71	19.26	19.23	19.77	20.26	20.99	21.54	21.50	22.05	22.54
	8H	18.95	19.44	19.46	19.93	20.50	21.24	21.72	21.75	22.21	22.78